

In the claims:

1. (Currently Amended) A method of [analysing] analyzing a bundle of banknotes, which method comprises the steps of providing a bundle of banknotes, which bundle comprises at least one surface defined by the edges of banknotes, illuminating the surface of said bundle, providing a two-dimensional image of the bundle by making use of an optical sensor, and providing an output signal that represents the result of the analysis, [characterized in that] wherein the [provision] providing of the two-dimensional image is carried out in such a manner that the image is enlarged in the y-direction, which y-direction is defined as the height of the bundle of banknotes.
2. (Currently Amended) [A] The method according to claim 1, [characterized in that] wherein the image is reduced in the x-direction, which x-direction is defined as the width of the bundle of banknotes.
3. (Currently Amended) [A] The method according to [any one or more of the claims 1-2, [characterized in that] claim 1 wherein the step of providing the two-dimensional image of the bundle and obtaining an output signal comprises the step of carrying out an image processing operation, using a pixel matrix.
4. (Currently Amended) [A] The method according to claim 3, [characterized in that] wherein the step of carrying out an image processing operation comprises the provision of a pixel matrix in which the number of pixels in the y- direction is larger than the number of pixels in the x-direction.
5. (Currently Amended) [A] The method according to claim 4, [characterized in that] wherein the number of pixels in the y-direction is at least 3 times larger than the number of pixels in the x-direction.
6. (Currently Amended) [A] The method according to claim 4, [characterized in that] wherein the number of pixels in the y-direction is preferably at least 5 times larger than the number of pixels in the x-direction.

7. (Currently Amended) [A] The method according to [any one or more of the claims 3-6, characterized in that] claim 3 wherein the step of carrying out the image processing operation comprises the steps of awarding a value corresponding to the optical density to a pixel, determining a threshold value of the optical density, awarding a priority to a pixel having an optical density value higher than the threshold value while determining the so-called second derivative of the density profile of the surrounding pixels, determining an average value of the density for a row of pixels in the y-direction, which row comprises one or more pixels having a priority, determining the spread and the standard deviation of the average value thus determined, and providing an output signal which is the summation of the number of average values higher than the threshold value.

8. (Currently Amended) [A] The method according to [any one or more of the claims 1-7, characterized in that] claim 1 wherein the bundle is subjected to one or more than destructive operations prior to said illuminating step.

9. (Currently Amended) [A] The method according to claim 8, [characterized in that] wherein according to said destructive operation one or more sides or edges of the bundle of banknotes is subjected to a mechanical operation, such that one or more clean surfaces are obtained, which clean surfaces are used in [analysing] analyzing the bundle of banknotes.

10. (Currently Amended) [A] The method according to [any one or more of the preceding claims, characterized in that] claim 1 wherein the analysis comprises the determination of one or more of the following parameters, viz. the authenticity, the number of banknotes, the value and the fitness of the bundle of banknotes.

11. (Currently Amended) [A] The method according to [any one or more of the claims 1-10, characterized in that] claim 1 wherein said irradiation with UV light is carried out on one side of a bundle of banknotes.

12. (Currently Amended) [A] The method according to [any one or more of the claims 1-10, characterized in that] claim 1 wherein said irradiation with infrared light is carried out on one side of a bundle of banknotes.

13. (Currently Amended) [A] The method according to [any one or more of the preceding claims 10-12, characterized in that] claim 10 wherein an image of one side of the bundle of banknotes is obtained by making use of a high-resolution camera as an optical sensor, which image is processed, using a suitable data processing unit, for the purpose of determining the authenticity of the bundle.

14. (Currently Amended) [A] The method according to [any one or more of the preceding claims 10-12, characterized in that] claim 10 wherein an image of one side of the bundle of banknotes is obtained by making use of a high-resolution camera as an optical sensor, which image is processed, using a suitable data processing unit, for the purpose of determining the number of banknotes in a bundle.

15. (Currently Amended) [A] The method according to [any one or more of the preceding claims 10-12, characterized in that] claim 10 wherein said determination of the number of banknotes in a bundle of banknotes is carried out by irradiating one side of the bundle with far infrared light at a number of angles of incidence and carrying out a time measurement on the reflected radiation.

16. (Currently Amended) [A] The method according to [any one or more of the preceding claims 10-12, characterized in that] claim 10 wherein an image of one side of the bundle of banknotes is obtained by making use of a high-resolution camera as an optical sensor, which image is processed, using a suitable data processing unit, for the purpose of determining the origin and/or the value of the bundle of banknotes.

17. (Currently Amended) [A] The method according to claim 10, [characterized in that] wherein the fitness of a bundle of banknotes is determined by measuring the compressibility of a bundle of banknotes.

18. (Currently Amended) [A] The method according to claim 10, [characterized in that] wherein the fitness of a bundle of banknotes is determined by measuring the acoustic resistance of a bundle of banknotes.

19. (Currently Amended) A device for [analysing] analyzing a bundle of banknotes, which bundle comprises at least one surface defined by the edges of the banknotes, said device comprising a light source for illuminating said surface, at least one optical sensor for providing a two-dimensional image, an image processing unit for processing a two-dimensional image, and providing an output signal that represents the result of the analysis, [characterized in that] wherein the optical sensor provides a two-dimensional image which is enlarged in the y-direction, which y-direction is defined as the height of the bundle of banknotes.

20. (Currently Amended) [A] The device according to claim 19, [characterized in that] wherein the optical sensor provides a two-dimensional image that is reduced in the x-direction, which x-direction is defined as the width of the bundle of banknotes.

21. (Currently Amended) [A] The device for [analysing] analyzing a bundle of banknotes according to [any one or more of the claims 19-20, characterized in that] claim 19 wherein the optical sensor comprises a number of individual optical sensors, which optical sensors each receive a segment of the illuminated bundle of banknotes, wherein use is made of a mirror construction.

22. (Currently Amended) [A] The device for [analysing] analyzing a bundle of banknotes according to claim 21, [characterized in that] wherein said mirror construction is made up of a number of submirrors, in particular a semi-transparent mirror.

23. (Currently Amended) [A] The device for [analysing] analyzing a bundle of banknotes according to [any one or more of the claims 21-22, characterized in that] claim 21 wherein said sensors are individually movable in x-, y-and z-directions.

24. (Currently Amended) [A] The device for [analysing] analyzing a bundle of banknotes according to claim 19, [characterized in that] wherein said optical sensor is a scanning camera, which scanning camera makes a scan of the bundle of banknotes in the x-direction.

25. (Currently Amended) [A] The device for [analysing] analyzing a bundle of banknotes according to [any one or more of the claims 19-24, characterized in that] claim 19 wherein the device furthermore comprises a cutting element, which removes an amount of material from a bundle of banknotes in a plane perpendicular to the z- direction, which cut surface is used as the surface in the illuminating step.